

THE PENDING CLAIMS:

1-64. (Canceled)

65. (Previously presented) A semiconductor wafer processing system, comprising:
a buffer chamber enclosing a first robot;
one or more processing chambers attached to the buffer chamber;
a transfer chamber enclosing a second robot;
one or more processing chambers attached to the transfer chamber, wherein at least one vapor deposition chamber is attached to the transfer chamber;
a load lock comprising a heating element and attached to the buffer chamber;
and
two or more transition chambers which separate the transfer chamber and the buffer chamber, the transition chambers each comprising a heating element disposed therein.

66. (Previously presented) The semiconductor wafer processing system of claim 65, wherein each of the transition chambers further comprises a wafer holder.

67. (Previously presented) The semiconductor wafer processing system of claim 66, wherein each of the transition chambers further comprises a cooling plate.

68. (Previously presented) The semiconductor wafer processing system of claim 65, wherein each of the transition chamber heating elements comprises a lamp.

69. (Previously presented) The semiconductor wafer processing system of claim 65, wherein each of the transition chambers further comprises a cooling plate.

70. (Previously presented) The semiconductor wafer processing system of claim 65, wherein each of the transition chamber heating elements comprises a resistive heater.

71. (Previously presented) The semiconductor wafer processing system of claim 70, wherein each of the transition chambers further comprises a wafer holder.

72. (Previously presented) The semiconductor wafer processing system of claim 65, wherein the transition chambers are isolated from the transfer chamber and the buffer chamber.

73. (Previously presented) The semiconductor wafer processing system of claim 65, wherein the transition chambers are pass-through chambers.

74. (Previously presented) A semiconductor wafer processing system, comprising:
a buffer chamber enclosing a first robot;
one or more processing chambers attached to the buffer chamber;
a transfer chamber enclosing a second robot;
one or more processing chambers attached to the transfer chamber, wherein at least one vapor deposition chamber is attached to the transfer chamber;
a first load lock comprising a heating element and attached to the buffer chamber; and
two transition chambers which separate the transfer chamber and the buffer chamber, the transition chambers each comprising a heating element and two wafer holders disposed therein.

75. (Previously presented) The semiconductor wafer processing system of claim 74, wherein each of the transition chamber heating elements comprises a lamp.

76. (Previously presented) The semiconductor wafer processing system of claim 74, wherein each of the transition chambers further comprises a cooling plate.

77. (Previously presented) The semiconductor wafer processing system of claim 74, further comprising a second load lock comprising a heating element and attached to the buffer chamber.

78. (Previously presented) The semiconductor wafer processing system of claim 74, wherein the first load lock heating element is a lamp or a resistive heater.

79. (Previously presented) The semiconductor wafer processing system of claim 74, wherein the transition chambers are isolated from the transfer chamber and the buffer chamber.

80. (Previously presented) The semiconductor wafer processing system of claim 74, wherein the transition chambers are pass-through chambers.

81. (Previously presented) A method of processing a wafer in a semiconductor wafer processing system, comprising:

introducing a wafer into a first load lock of a semiconductor wafer processing system, the semiconductor wafer processing system comprising:

a buffer chamber enclosing a first robot;

one or more processing chambers attached to the buffer chamber;

a transfer chamber enclosing a second robot;

one or more processing chambers attached to the transfer chamber,

wherein at least one vapor deposition chamber is attached to the transfer chamber;

a first load lock comprising a heating element and attached to the buffer chamber; and

two or more transition chambers which separate the transfer chamber and the buffer chamber, the transition chambers each comprising a heating element disposed therein;

partially preheating the wafer in the first load lock;

transferring the wafer into one of the transition chambers and partially preheating the wafer in the transition chamber;

transferring the wafer into one of the processing chambers attached to the transfer chamber; and then
performing a vapor deposition on the wafer in the processing chamber.

82. (Previously presented) The method of claim 81, wherein after partially preheating the wafer in the first load lock, the wafer is transferred by the first robot into the transition chamber; and

after partially preheating the wafer in the transition chamber, the wafer is transferred from the transition chamber by the second robot into the processing chamber.

83. (Previously presented) The method of claim 82, wherein after the vapor deposition is performed on the wafer, the wafer is transferred from the processing chamber by the second robot.

84. (Previously presented) The method of claim 83, further comprising cooling the wafer in one of the transition chambers after performing a vapor deposition on the wafer.